

Claims

1. A method of removing a part of a transgene after its integration into a genome comprising flanking said part of the transgene on each side thereof with an attachment P region (attP) of bacteriophage λ , the attP region comprises a nucleic acid sequence as set forth in SEQ ID NO:1 or fragment thereof which maintains the same function, or nucleic acids which hybridise under stringent conditions to the DNA of SEQ ID NO:1 and function as an attP region, or nucleic acids which differ from the DNA of SEQ ID NO:1 due to the degeneracy of the genetic code and which function as an attP region, and inducing a high frequency of intrachromosomal homologous recombination between flanking attP regions whereby said part of the transgene sandwiched therebetween is removed.
2. A method as claimed in Claim 1 characterised in that said transgene comprises a marker gene and/or vector sequence and/or other foreign ancillary nucleic acid.
3. A method as claimed in Claim 1 or Claim 2 characterised in that the marker gene confers resistance to antibiotics and/or herbicide resistance.
4. A method as claimed in any one of the preceding claims characterised in that the marker gene is involved in specific biosynthetic pathways and/or involved in environmental tolerance.
5. A method as claimed in any one of the preceding claims characterised in that the marker gene is selected from the group consisting of *nptII*, *Ble*, *dhfr*, *cat*, *aphIV*, *SPT*, *aaaC3*, *aaaC4*, *bar*, *EPSP*, *bxn*, *psbA*, *tfdA*, *DHPS*, *AK*, *sul*, *crsI-1* and *tdc*.
6. A method as claimed in any one of the preceding claims characterised in that more than one marker gene and/or vector sequence and/or foreign nucleic acid part is

removed from the transgene and each such part is to be removed is flanked by an attP region.

7. A method as claimed in any one of the preceding claims characterised in that
5 the attP region comprises 352 basepairs, or functionally equivalent fragment thereof,
located between positions 27492 and 27844 of bacteriophage λ .

8. A method as claimed in any one of the preceding claims characterised in that
the attP regions are in a cassette.

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9. A method as claimed in Claim 8 characterised in that the cassette further
includes a transformation booster sequence or fragment thereof for enhancing
homologous and illegitimate recombination.

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10. A method as claimed in Claim 8 or Claim 9 characterised in that the cassette
includes an effector gene such as oryzacyctastin-I or functional equivalent thereof.

11. A method as claimed in any one of the preceding claims characterised in that
the genome is a plant genome.

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12. A plant or plant cell or plant tissue whenever produced by the method of any
one of Claims 1 to 11.

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13. A method which comprises performing the method of Claim 11 to produce a
plant or providing a plant or plant cell or plant tissue of Claim 12 and, in either case
growing the plant and/or harvesting products therefrom.

14. A plant or plant cell or plant tissue comprising recombinant attP regions.

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15. An attP recombination cassette comprising a marker gene and/or vector
sequence and/or foreign ancillary nucleic acid flanked on either side by an attP region

the attP region comprising a nucleic acid sequence as set forth in SEQ ID NO:1 or fragment thereof which maintains the same function, or nucleic acids which hybridise under stringent conditions to the DNA of SEQ ID NO:1 and function as an attP region, or nucleic acids which differ from the DNA of SEQ ID NO:1 due to the 5 degeneracy of the genetic code and which function as an attP region.

16. Use of an attP recombination cassette of Claim 15 for removing a part integrated into a plant genome.

10 17. A kit for removing a part of a transgene after its integration into a plant genome comprising an attP recombination cassette as claimed in Claim 15.

15 18. A plant or plant cell or plant tissue comprising a recombinant transgene integrated into its genome characterised in that the transgene is associated with a bacteriophage λ attP region on respective sides thereof, the attP region comprising a nucleic acid sequence as set forth in SEQ ID NO:1 or fragment thereof which maintains the same function, or nucleic acids which hybridise under stringent conditions to the DNA of SEQ ID NO:1 and function as an attP region, or nucleic acids which differ from the DNA of SEQ ID NO:1 due to the degeneracy of the 20 genetic code and which function as an attP region.

19. A plant or plant cell or plant tissue as claimed in Claim 18 characterised in that it includes one such bacteriophage λ attP region and one effector transgene integrated into its genome.

25 20. A plant or plant cell or plant tissue as claimed in Claim 19 characterised in that the bacteriophage λ attP regions and one transgene are not associated with a marker gene and/or vector sequence and/or other foreign ancillary nucleic acid.

30 21. A plant or plant cell or plant tissue as claimed in any one of Claims 18 to 20 characterised in that the transgene is further associated with a transformation booster

sequence or fragment thereof which is capable of enhancing homologous and illegitimate recombination.

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